EtherCAT ASIC family reaches new milestone

The new ET1100, the latest EtherCAT Slave Controller ASIC, is now available. The arrival of this chip marks another major milestone in the history of EtherCAT – the high performance, next generation Industrial Ethernet fieldbus. With its four EtherCAT ports, the ET1100 emphasizes significant topology and cost advantages from EtherCAT technology.

The EtherCAT community refers to this chip as “the big ASIC”. However, just like its “little brother”, the ET1200 (available since November 2006), the ET1100 ASIC is extremely compact: the BGA128 housing measures only 10 x 10 mm.

32 digital I/O ports and distributed clock hardware for ultra precise synchronization are on-board. Local access to process and parameter data in the 8 kbyte internal DPRAM is given through the parallel µC-Bus or via a fast serial interface. Due to the four EtherCAT ports, the chip ideally supports flexible topologies and even allows one to use redundant drop lines. The ports can either be configured as MII for usage with standard Ethernet PHYs or used in LVDS-Mode for modular devices. Features that are not being used at any given time are switched off internally to intelligently limit power consumption.

Even though EtherCAT products based on FPGAs have been shipping since 2003 and IP cores for the market-leading FPGA types as well as the Hilscher netX family have been available for some time, the availability of these ASICs marks a major step forward for EtherCAT development. It clearly demonstrates the finalization of the technology development phase. EtherCAT hence provides stability with long-term future support assured for all organizations that invest in the leading edge technology.

ETG booth at Hanover Fair: Hall 9, Booth F13